

drawing device. In certain embodiments, the print head is part of a digital fingertip printing device. In certain embodiments, the print head is part of a self-printing book device. In certain embodiments, the print head is part of a self-image printing camera attachment device. In certain embodiments, the print head is part of cellular telephone printing device. In certain embodiments, the print head is part of computer peripheral printer attachment device. In certain embodiments, the print head is part of digital skin augmentation device. Also provided are devices that can carry out or perform the above methods.

DESCRIPTION OF REPRESENTATIVE SPECIFIC EMBODIMENTS

[0016] Direct remote digital/analog printing devices and mediums have been developed, which are capable of directly digitally printing on non-uniform or uniform substrate/mediums. Examples of devices are also capable of recognizing wireless digital or analog signals for processing and printing or directly scanning substrates using information (analog or digitally) encoded. The read/write devices can be remote and operate separately or can be attached to existing communications devices and products.

[0017] Before the present invention is described in greater detail, it is to be understood that this invention is not limited to particular embodiments described, as such may, of course, vary. It is also to be understood that the terminology used herein is for the purpose of describing particular embodiments only, and is not intended to be limiting, since the scope of the present invention will be limited only by the appended claims.

[0018] Where a range of values is provided, it is understood that each intervening value, to the tenth of the unit of the lower limit unless the context clearly dictates otherwise, between the upper and lower limit of that range and any other stated or intervening value in that stated range, is encompassed within the invention. The upper and lower limits of these smaller ranges may independently be included in the smaller ranges and are also encompassed within the invention, subject to any specifically excluded limit in the stated range. Where the stated range includes one or both of the limits, ranges excluding either or both of those included limits are also included in the invention.

[0019] Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although any methods and materials similar or equivalent to those described herein can also be used in the practice or testing of the present invention, representative illustrative methods and materials are now described.

[0020] All publications and patents cited in this specification are herein incorporated by reference as if each individual publication or patent were specifically and individually indicated to be incorporated by reference and are incorporated herein by reference to disclose and describe the methods and/or materials in connection with which the publications are cited. The citation of any publication is for its disclosure prior to the filing date and should not be construed as an admission that the present invention is not entitled to antedate such publication by virtue of prior invention. Further, the dates of publication provided may be

different from the actual publication dates which may need to be independently confirmed.

[0021] It is noted that, as used herein and in the appended claims, the singular forms “a”, “an”, and “the” include plural referents unless the context clearly dictates otherwise. It is further noted that the claims may be drafted to exclude any optional element. As such, this statement is intended to serve as antecedent basis for use of such exclusive terminology as “solely”, “only” and the like in connection with the recitation of claim elements, or use of a “negative” limitation.

[0022] As will be apparent to those of skill in the art upon reading this disclosure, each of the individual embodiments described and illustrated herein has discrete components and features which may be readily separated from or combined with the features of any of the other several embodiments without departing from the scope or spirit of the present invention. Any recited method can be carried out in the order of events recited or in any other order which is logically possible.

[0023] The system provides for direct hand-held portability, finger tip attachment, hand-held device attachment, palm carrying, segmented or detached geometries, highly miniaturized or micro-etched or machined elements, biologically or physiologically interfaced configurations, implanted configurations and any practical form which provides for direct writing, printing or encoding, as well as direct or indirect digital or analog information receiving capabilities. Direct remote digital printing units can be attached to or used with cellular telephones, digital electronic devices, note book computers, toys, automobiles, palm size computers, wrist watches, global positioning units, digital cameras, digital video recorders, digital voice recorders, radios, digital music players, desk top computers, appliances, DVD players, various electric devices, remote military field devices, airplane phone systems, pagers, logistics recording units, field monitoring equipment, medical recording equipment, ultrasound equipment, video arcade games, Blackberry™ devices, Palm Pilots™ PDA devices, Blackberry™ PDA devices, Symbol™ devices, UPST™ electronic note pads or the like.

[0024] More specifically, the system can receive information remotely and either via analog or digitally (wirelessly) or directly scan encoded information embedded in a substrate optically, magnetically, thermally, mechanically, radiatively, micro-electronically, conductively, piezo electrically, chemically or the like. The encoded information can subsequently be processed and used to designate parameters used in the subsequent printing process. The information received can be analog signals, voice, voice-over ID, parallel, serial, radio wave, high frequency, optically-encoded through broad band, electronically broad band encoded, compressed or non-compressed digitally, in written or printed, typed or graphically displayed, character recognized, bar-coded, embossed, encapsulated, sequential or non-sequential, illuminated or non-illuminated, embedded, security encoded, holographically encoded, biologically encoded, encoded with plural means such as partially optically partially magnetically encoded or partially encoded by at least 2 means or as many as 20. More typically encoded at least 2 to 10 means and more typically encoded at least 2 to 5 means. The encoded information can be continuous or segmented and regionally encoded parallel, sectorized or non-sequential.